FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7343

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7343. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of treated wastewater to Olympus Terrace Sewer District POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information. Process flow diagram is included in Appendix B.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised.

GENERAL INFORMATION

Applicant:	Adpro Litho Inc.
Location:	11012 Mukilteo Speedway Mukilteo, WA 98275-4799
Type of Facility:	Lithographic Printing
Facility Discharge Location:	Latitude: 47° 54' 30" N Longitude: 122° 17' 03" W
POTW Receiving Discharge:	Olympus Terrace Sewer District POTW

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

History

Adpro Litho Inc., is a commercial printing company located in Mukilteo, Snohomish County, since 1988. The activities at this shop involve imaging, film processing, film printing, platemaking, paper printing with ink, and press laminating to produce brochures, posters, annual reports, magazine covers, etc., for customers.

All papers are stored in the warehouse space at the west-end of the building. The solvents are kept in bulk and are stored on a spill-containment pallet in the rear of the building. A spill-containment kit is located in this area. All litho ink is stored on the north wall on shelving near the presses.

Wastewater Generation

Wastewater is primarily generated from the film processing, paper processing, and plate processor cleanup operations. The main contaminant of concern is silver, which may be present as a silver thiosulfate complex. Silver can be found in used fixer, bleach-fixer, washless stabilizer and C-41 bleach used for film and paper processing operations. The film processing unit uses developer, bleach, fixer and stabilizer solution. The paper processing unit uses developer and a bleach-fix mix solution. Some processing units also use water for rinsing the chemicals from the films and paper.

The chemicals in the processing units are replenished as needed to maintain the necessary strength. The spent solution from the fixer, bleach-fixer, C-41 bleach and washless stabilizers go through a series of Electrolytic Recovery Units for silver recovery then a final collection filter prior to discharge to the sanitary sewer (Olympus Terrace Sewer District). The developer and washwater are also routed to the final collection filter prior to discharge to the sanitary sewer.

The "color art" processing uses a 99% water-based chemistry and soap. This wastewater and the Fuji Litho-aluminum plate processor washwater are discharged directly into the sanitary sewer without treatment. Most of the plate cleaning operations are conducted using volatile organic compound (VOC) solvent and dried with rags. Therefore, almost no wastewater is generated.

The ink remaining on the rollers after a print job is often cleaned up by applying blanket wash (cleaning solution) to the rollers to dissolve the ink and then using an ink cleanup tray with a squeegee to scrape the excess ink/wash mix off of the rollers into the tray. The entire cleanup solvent/ink sludge mixture could be a hazardous waste if certain chlorinated compounds or other chemical solvents are used in the blanket wash formulation. The sludge volume generated from

each cleanup job is generally small, and it is often discharged into the sanitary sewer. This sludge may contain heavy metals such as lead, silver, chromium, cadmium, and barium which can be found in some ink pigments. The Permittee may be required to collect, drum up and dispose of this material as hazardous waste. The Permittee will not be allowed to discharge this sludge into the sanitary sewer because it may contaminate Olympus Terrace sludge. Improper disposal of solvent, inking and film developing chemicals are a concern for the POTW and the Department. According to the shop manager, all press solvent is disposed of through Safety-Kleen.

Treatment Process

Electrolytic Recovery Units (ERU) work by attracting positively charged silver ions to a negatively charged cathode that is immersed in used fixer. ERUs remove the majority of easily recoverable silver in a nearly pure metallic state. An advantage of a properly functioning ERU is that the solutions processed can be reused, given proper attention to pH levels. A disadvantage is that one unit can only reduce silver concentration down to a range of 100 to 300 ppm. Adpro Litho Inc. employs two ERUs in series, and the effluent concentration has been reported to be less than 2 ppm for silver. The Department determines AKART for the film processing, paper processing, and plate processor cleanup operations is 2 mg/L. All recovered silver flake is picked up by Hallmark Refinery. The spent filters are collected by Agco Metalex.

PERMIT STATUS

The previous permit for this facility was issued on July 1, 1996.

An application for permit renewal was submitted to the Department on June 21, 1999, and accepted by the Department on October 14, 1999.

The facility last received an inspection on June 11, 1996.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable methods of treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Lithographic printing is not a categorical industry. However, photoprocessing activity engaged by Adpro Litho is considered as a categorical industry in the photographic processing subcategory, subpart A of 40 CFR part 459. However, the federal regulation applies to industries discharging to surface waters in the United States. Since Adpro Litho does not discharge to surface waters, the categorical limits do not apply to the facility. The effluent limits set in this permit will be those local limits which were agreed to by the Olympus Terrace Sewer District POTW.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the Olympus Terrace Sewer District POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by the Olympus Terrace Sewer District POTW. Applicable limits for this discharge include the following:

Parameter	Daily Maximum
Silver	2 ppm
pH	6 to 10 s.u.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110). The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

Special conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 273-216-110 and 40 CFR 403.12 (e),(g), and (h)].

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S5. as authorized under RCW 90.48.110, WAC 173-220-150, chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a solid waste plan to prevent solid waste from causing pollution of waters of the state.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all Industrial Waste Discharge to POTW permits issued by the Department.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

PERMIT MODIFICATIONS

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for a period of 5 years.
This permit will be subject to complete review and any necessary modification or renewal in the Snohomish Basin Planning year of FY2004.

REFERENCES FOR TEXT AND APPENDICES

1. Code of Federal Regulations, 40 CFR 459 for Photographic Point Source Category.

2. Environmental Management and Pollution Prevention, a guide for photoprocessing, published by Washington State Department of Ecology, September 1994.

3. State Waste Discharge Permit Application submitted by the Permittee on June 21, 1999.

4. State Waste Discharge Permit Program, Chapter 173-216 WAC, September 22, 1993.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Further information may be obtained from the Department by telephone, (425) 649-7000, or by writing to the address listed above.

This permit and fact sheet were written by Jeanne Tran, P.E.

APPENDIX B--PROCESS FLOW DIAGRAM